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# PETITION TO MAKE SPECIAL

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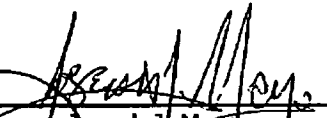
From: JOSEPH J. MAYO (REG. NO. 53,288)  
Fax No.: (858) 777-5425  
Phone No.: (858) 442-5877

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Ref. No.: JR-P0009  
US Serial No.: 10/709,944

### Comments:

I hereby certify that this correspondence is being facsimile transmitted to the United States Patent and Trademark Office at FAX number 703-872-9306 on July 15<sup>th</sup>, 2004.

Fax Coversheet (1 page) (this sheet) Petition to Make Special (9 pages) Credit Card Payment Form (1 page)	Signature:  Joseph J. Mayo Date: 7/15/2004
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7910 Ivanhoe Ave., Ste. 325  
La Jolla, California 92037  
P. (866)221-6964

Joseph J. Mayo  
D. (858) 442-5877  
F. (858) 777-5425  
jmayo@dalinalaw.com

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

App. No. : 10/709,944 Confirmation No.: 3943  
Applicant : Rodnunsky, et al. Docket No. : JR-P0009  
Filed : 6/8/2004 Customer No. : 36067  
TC/A.U. : UNKNOWN  
Examiner : UNKNOWN

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For: SYSTEM AND METHOD FOR FACILITATING FLUID THREE-DIMENSIONAL  
MOVEMENT OF AN OBJECT VIA DIRECTIONAL FORCE

## PETITION TO MAKE SPECIAL UNDER 37 C.F.R. 1.102(d)

Commissioner for Patents  
703-872-9306

Dear Sir:

Applicant hereby requests the above-identified application be Made Special in accordance with the Accelerated Examination procedure of MPEP 708.02 VIII.

Applicant submits the fee for Accelerated Examination as set forth in 37 CFR 1.17 (h). Please use attached Credit Card Payment Form for the associated fees and charge any fee not accounted for on the Credit Card Payment Form to Deposit Account 502689 with reference to JR-P0009.

Applicant submits that all claims in the pending application are directed to a single invention.

Applicant has conducted a pre-examination search in class/subclasses 104/180, 348/144, 157, 212/76, 83, 248/58, 254/264, 352/243. A detailed discussion of the references found in the pre-examination search is included herein with patentability discussed to the particularity required by 37 CFR 1.111 (b) and (c).

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**Pre-examination Search**

Applicant searched the following classes for relevant references: 104/180, 348/144, 157, 212/76, 83, 248/58, 254/264, 352/243. The relevant patents conducted during the search are identified below.

**1. U.S. Patent No.s 4,710,819 and 4,625,938**

U.S. Patent No. 4,710,819 (hereinafter the '819 patent), issued to Brown, discloses an apparatus configured to move an object in three-dimensional space using a set of at least three cables.

The '819 patent requires at least three cables that are attached to an object. The apparatus relies on controllable angular isolation in order to prevent pendulum motions in the object. For linear direction of an object, the apparatus requires independent movement of all cables in the system. This inter-dependence of cable movement regardless of object movement makes system control non-trivial. Movement of an object along the X-axis for example is not possible through the movement of one cable, but instead requires the movement of all supporting cables in unequal amounts since in general an object attached to at least three cables requires that the lengths of all cables to change when moving in a straight line in a given direction. This is the reason why complex control software is required, the apparatus needs all ropes to move in a coordinated manner for even simple linear movements.

**Applicant's Claimed Invention is Different**

An embodiment of Applicant's invention moves an object in three-dimensional space via one or two lines, i.e., an X line configured to move the object in the X-axis, a Y line configured to move the object in the Y-axis and a Z movement device configured to move both the X and Y lines. One embodiment of the invention utilizes one line total, with an X line side and Y line side that are termed X line and Y line for short even though they are sides of the same line. The '819 Patent does not disclose a Z movement device as claimed and does not share the independence of axes as Applicant's invention.

## 2. U.S. Patent 5,440,476

United States Patent No. 5,440,476 (hereinafter the '476 patent) describes a system that positions a work point in three-dimensional space using at least three reeving systems. In addition, the control system requires all ropes move in a coordinated way to shorten and lengthen the amount of deployed cable in each cable used in the apparatus. For linear direction of an object, the apparatus requires movement of all cables in the system. The '476 patent also requires at least three reeving systems be connected to whatever object is to be moved.

### Applicant's Claimed Invention is Different

An embodiment of Applicant's invention moves an object in three-dimensional space via one or two lines, i.e., an X line configured to move the object in the X-axis, a Y line configured to move the object in the Y-axis and a Z movement device configured to move both the X and Y lines. One embodiment of the invention utilizes one line total, with an X line side and Y line side that are termed X line and Y line for short even though they are sides of the same line. The '476 Patent does not disclose a Z movement device as claimed and does not share the independence of axes as Applicant's invention.

## 3. U.S. Patent 5,673,625

United States Patent No. 5,673,625 (hereinafter the '625 patent) describes a system for yarding logs that moves the logs within three-dimensional space. The system moves logs along the path set up by a single yarding cable. A method and apparatus for yarding logs by introducing slack is provided for use with a mono-cable system having a continuous loop of cable strung through a logging area along a path that the harvested timber is conveyed. The invention includes advancing the mono-cable system along the path of the mono-cable system until a length of cable not being used to secure a log is available. Slack is then created in the cable of the mono-cable system, after which the cable is transported to a log located on either side and distant from the path. The choker is then secured to the log, and the hook of the choker is secured to the cable.

The slack of the cable is then eliminated, such that the secured log is retrieved from its felled position distant from the path to a position adjacent the path. The cable is then advanced such that the hook of the choker is caught on a stopper of the mono-cable system, and the log is moved along the path to a transport location from which the log is removed from the logging area.

Applicant's Claimed Invention is Different

An embodiment of Applicant's invention moves an object in three-dimensional space via one or two lines, i.e., an X line configured to move the object in the X-axis, a Y line configured to move the object in the Y-axis and a Z movement device configured to move both the X and Y lines. One embodiment of the invention utilizes one line total, with an X line side and Y line side that are termed X line and Y line for short even though they are sides of the same line. The '625 Patent does not disclose a Z movement device as claimed and does not share the independence of axes as Applicant's invention.

**4. U.S. Patent 5,562,040**

United States Patent No. 5,562,040 (hereinafter the '040 Patent) describes a system for moving objects via an aerial ropeway that includes a haulage rope that travels along a path between two stations, and comprises two driving wheels. The system moves objects beneath a point under the line between the two stations.

**Applicant's Claimed Invention is Different**

An embodiment of Applicant's invention moves an object in three-dimensional space via one or two lines, i.e., an X line configured to move the object in the X-axis, a Y line configured to move the object in the Y-axis and a Z movement device configured to move both the X and Y lines. One embodiment of the invention utilizes one line total, with an X line side and Y line side that are termed X line and Y line for short even though they are sides of the same line. The '040 Patent does not disclose a Z movement device as claimed and does not share the independence of axes as Applicant's invention.

**5. U.S. Patent 4,523,525**

United States Patent No. 4,523,525 (hereinafter the '525 Patent) describes a system for boatless waterskiing that effectively moves objects beneath an endless cable whose path is defined by support structures.

**Applicant's Claimed Invention is Different**

An embodiment of Applicant's invention moves an object in three-dimensional space via one or two lines, i.e., an X line configured to move the object in the X-axis, a Y line configured to move the object in the Y-axis and a Z movement device configured to move both the X and Y lines. One embodiment of the invention utilizes one line total, with an X line side and Y line side that are termed X line and Y line for short even though they are sides of the same line. The '525 Patent does not disclose a Z movement device as claimed and does not share the independence of axes as Applicant's invention.

**6. U.S. Patent 4,136,786**

United States Patent No. 4,136,786 (hereinafter the '786 Patent) describes a system yarding logs. A rigging arrangement and yarder are disclosed for yarding in which a single cable is used and which serves as a skyline for supporting a carriage. The carriage moves between the yarder and upper anchor point along a line.

Applicant's Claimed Invention is Different

An embodiment of Applicant's invention moves an object in three-dimensional space via one or two lines, i.e., an X line configured to move the object in the X-axis, a Y line configured to move the object in the Y-axis and a Z movement device configured to move both the X and Y lines. One embodiment of the invention utilizes one line total, with an X line side and Y line side that are termed X line and Y line for short even though they are sides of the same line. The '786 Patent does not disclose a Z movement device as claimed and does not share the independence of axes as Applicant's invention.

**7. U.S. Patent 6,566,834**

In U.S. Patent 6,566,834, (hereinafter the '834 Patent) an invention is disclosed in which a payload can be moved and angularly positioned within three-dimensional space. The invention requires a computer control system in order to calculate the change in lengths of the support ropes in order to move the payload between two points. The invention appears to require power at the platform and locates the winches for the system on the platform, further reducing the payload capacity of the platform. The invention requires at least 6 cables in order to operate.

Applicant's Claimed Invention is Different

An embodiment of Applicant's invention moves an object in three-dimensional space via one or two lines, i.e., an X line configured to move the object in the X-axis, a Y line configured to move the object in the Y-axis and a Z movement device configured to move both the X and Y lines. One embodiment of the invention utilizes one line total, with an X line side and Y line side that are termed X line and Y line for short even though they are sides of the same line. The '834 Patent does not disclose a Z movement device as claimed and does not share the independence of axes as Applicant's invention.

#### 8. U.S. Patent 5,585,707

In U.S. Patent 5,585,707, (hereinafter the '707 Patent) an invention is disclosed in which a robot or person can be readily moved within three-dimensional space. The payload is limited and the support structure is small scale. If the structure were to be scaled up, obstacles such as goal posts or light poles would inhibit the motion of the payload through a path between two points defined within the cube, since there are so many wires required to practice the invention. Also, the invention would not appear to allow the Z-axis to vary beneath the cube, and the size of the cube support structure to service a large volume of space would be extremely expensive to build on the scale required. The platform holds motors that limit the amount of payload that can be carried. Complex control must be used in order to keep the tensions in the cables coordinated from above and below the platform.

#### Applicant's Claimed Invention is Different

An embodiment of Applicant's invention moves an object in three-dimensional space via one or two lines, i.e., an X line configured to move the object in the X-axis, a Y line configured to move the object in the Y-axis and a Z movement device configured to move both the X and Y lines. One embodiment of the invention utilizes one line total, with an X line side and Y line side that are termed X line and Y line for short even though they are sides of the same line. The '707 Patent does not disclose a Z movement device as claimed and does not share the independence of axes as Applicant's invention.

#### 9. U.S. Patent 5,568,189

In U.S. Patent 5,568,189, (hereinafter the '189 Patent) an invention is disclosed for moving cameras in three-dimensional space. An aerial support platform is supported to extend below, and intermediate of, a pair of parallel cables mounted along respective opposite walls of a studio. A carriage rides on each of the parallel cables, and another pair of cables extends to connect the pair of carriages. A third carriage sits on the other pair of cables, and a series of further cables extend vertically from that carriage to the platform. The pair of carriages



positioned on the opposite walls of the studio are controlled to move in tandem, and the third carriage has controlled movement between those carriages. The platform may be raised or lowered relative to the third carriage, and thus has three linear axes of motion.

Applicant's Claimed Invention is Different

An embodiment of Applicant's invention moves an object in three-dimensional space via one or two lines, i.e., an X line configured to move the object in the X-axis, a Y line configured to move the object in the Y-axis and a Z movement device configured to move both the X and Y lines. One embodiment of the invention utilizes one line total, with an X line side and Y line side that are termed X line and Y line for short even though they are sides of the same line. The '189 Patent does not disclose a Z movement device as claimed and does not share the independence of axes as Applicant's invention.

**10. U.S. Patent 4,106,638**

In U.S. Patent 4,106,638, (hereinafter the '638 Patent) an invention is disclosed for loading and unloading ships. The system moves objects along a line and then vertically moves the objects into and out of a ship. The system moves objects over a defined line beneath the support structure to a ship.

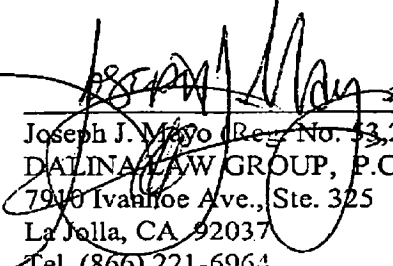
Applicant's Claimed Invention is Different

An embodiment of Applicant's invention moves an object in three-dimensional space via one or two lines, i.e., an X line configured to move the object in the X-axis, a Y line configured to move the object in the Y-axis and a Z movement device configured to move both the X and Y lines. One embodiment of the invention utilizes one line total, with an X line side and Y line side that are termed X line and Y line for short even though they are sides of the same line. The '638 Patent does not disclose a Z movement device as claimed and does not share the independence of axes as Applicant's invention.

**CONCLUSION**

In view of the above the Applicant requests that the Petition to Make Special be granted and the examination of the application be advanced.

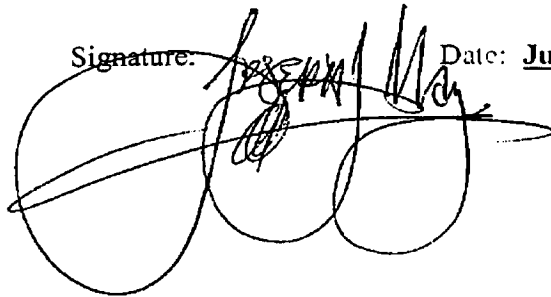
Respectfully Submitted,

  
Joseph J. Mayo (Reg. No. 43,288)  
DALINA LAW GROUP, P.C.  
7910 Ivanhoe Ave., Ste. 325  
La Jolla, CA 92037  
Tel. (866) 221-6964

**Correspondence Info:****CERTIFICATE OF TRANSMISSION****Customer Number 36067**

I hereby certify that this correspondence is being facsimile transmitted to the United States Patent and Trademark Office at FAX number 703-872-9306 on July 15<sup>th</sup>, 2004.

Signature:

Date: July 15<sup>th</sup>, 2004